

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended): A packaging material of the corrugated cardboard type,
comprising:

~~made by gluing together~~ a plane paper layer (11);

~~and~~ an auxiliary paper layer (12) arranged below the plane paper layer, with waves
presenting an amplitude (a) perpendicular to ~~the~~ a plane of propagation of the auxiliary paper
layer, and where ~~the wave tops of the waves~~ form a system of substantially parallel waves (10,
10', 10'') presenting an amplitude (b) in the plane of propagation of said auxiliary paper layer
(13), a;

a second plane paper layer (13) ~~being~~ arranged below said auxiliary paper layer (12),
~~characterised in, that it comprises;~~

a second auxiliary paper layer (14) arranged below said second plane paper layer (13)
~~and optionally a; and~~

an optional third plane paper layer (15) arranged below said second auxiliary paper
layer, wherein ~~and in that as far as the waves are concerned~~ which present an amplitude
perpendicular to the direction of propagation of the two auxiliary paper layers (12, 14), a have
a phase displacement ϕ is provided between the waves ~~of these layers~~, ϕ being in the range of

$$\frac{\pi}{4} - \frac{\pi}{3}$$

Claim 2 (currently amended): A packaging material according to claim 1, ~~characterised in, that~~ wherein the waves of at least one type of waves on the auxiliary paper layers (~~12, 14~~) are rather flat on the sides in such a manner that the waves are of a substantially serrated shape, viz. triangular waves with tops and bottoms which are optionally slightly rounded, or the waves can be substantially “square”, viz. square waves.

Claim 3 (currently amended): A packaging material according to claim 1, ~~characterised in, that the~~ wherein a surface of each auxiliary paper layer (~~12, 14~~) follows a face substantially corresponding to ~~the~~ mathematical functional expression:

$$z(x, y) = a \sin\left(\frac{2\pi}{\lambda_1} x + \frac{\pi}{2} + b \sin \frac{2\pi}{\lambda_2} y\right)$$

where a and λ_1 represent the amplitude and the wavelength, respectively, of the waves perpendicular to the plane of propagation of the auxiliary paper layer, and where b and λ_2 represent the amplitude and the wavelength, respectively, of the waves in the plane of said auxiliary paper layer, viz. the plane of propagation, and that the ratio

$$\frac{a}{b}$$

of the amplitudes for the two types of waves may be in the range of 0.10 to 0.60, ~~preferably 0.15 to 0.50, especially 0.22 corresponding to a = 0.5 mm and b = 2.25 mm.~~

Claim 4 (currently amended): A packaging material according to claim 1, ~~characterised in, that the~~ wherein a ratio

$$\frac{\lambda_1}{\lambda_2}$$

of the wavelengths for the two types of waves is in the range of 0.09 to 0.20 ~~and preferably is approximately 0.15 corresponding to $\lambda_1 = 3.5$ mm and $\lambda_2 = 23.5$ mm.~~

Claim 5 (currently amended): A packaging material according to claim 2, ~~characterised in, that~~ wherein the plane paper layers (11, 13) and the auxiliary paper layers (12, 14) are of the same thickness, preferably between 0.05 and 0.3 mm, ~~such as 0.1 mm, and that the auxiliary paper layers (3) is of a weight of 50 to 250 g/m².~~

Claim 6 (currently amended): A packaging material according to claim 1 or 2, ~~characterised in, that~~ wherein starch-based or cold-water glue is used for the lamination of the layers.

Claim 7 (new): A packaging material according to claim 3, wherein the ratio

$$\frac{a}{b}$$

of the amplitudes for the two types of waves is preferably 0.15 to 0.50.

Claim 8 (new): A packaging material according to claim 7, wherein the ratio

$$\frac{a}{b}$$

is 0.22 corresponding to $a = 0.5$ mm and $b = 2.25$ mm.

Claim 9 (new): A packaging material according to claim 4, wherein a ratio

$$\frac{\lambda_1}{\lambda_2}$$

of the wavelengths for the two types of waves is approximately 0.15 corresponding to $\lambda_1 = 3.5$ mm and $\lambda_2 = 23.5$ mm.

Claim 10 (new): A packaging material according to claim 5, wherein the plane paper layers and the auxiliary paper layers are 0.1 mm thick, and the auxiliary paper layers is of a weight of 50 to 250 g/m².